The ARB issues an annual network description which provides details on the monitoring stations throughout the State, including those outside of the ARB PQAO (i.e. monitoring stations operated by the South Coast AQMD, the Bay Area AQMD, and the San Diego APCD). The annual report also includes information on monitoring stations in the country of Mexico that are located near the border of California. This annual network description includes not just active monitoring sites but any monitoring site that collected air pollution data in the State of California since the early 1970's. While it is informative to know the availability of historic data, EPA believes a separate table or report that only addresses the currently active monitoring stations in the State would be more useful.

As discussed above, there are four PQAOs in the State of California, the ARB, the South Coast AQMD, the Bay Area AQMD, and the San Diego APCD. These four organizations operate monitoring networks that provide data for the 15 air basins in the State. The three local PQAOs operate monitoring networks that provide data for three of the 15 State air basins: South Coast, Bay Area, and San Diego County. The ARB PQAO operates multiple monitoring networks that cover the remaining 12 State air basins: Great Basin, Lake County, Lake Tahoe, Mojave Desert, Mountain Counties, North Central Coast, North Coast, Northeast Plateau, Sacramento Valley, Salton Sea, San Joaquin Valley, and South Central Coast.

In some instances, multiple local Districts operate the monitoring networks in a given air basin. Furthermore, the boundaries of metropolitan and micropolitan statistical areas (MSAs), which are established by the US Census bureau, also overlap air basins and local monitoring districts. EPA uses the population statistics of MSAs to determine the minimum SLAMS monitoring requirements for ozone, PM10, and PM2.5.

We have reviewed the SLAMS monitoring network for the ARB PQAO and have determined that there are a few MSAs which do not meet the minimum monitoring requirements for ozone, PM2.5 and PM10 established by EPA in its regulations at 40 CFR 58, Appendix D. These are addressed in the findings in this section of the report.

Table 1 summarizes the number of SLAMS monitoring sites operated in the ARB PQAO.

TABLE 1: SUMMARY OF SLAMS CRITERIA POLLUTANT MONITORS IN THE ARB PQAO

AGENCY	Ozone	CO	NO2	SO2	PM2.5	PM10	TSP Lead
ARB	25	6	14	1	17	22	1
Antelope Valley		1	1		1		
Great Basin Unified APCD					1	11	
Imperial County APCD	2	1			2	5	
Kern County APCD					1	1	
Lake County AQMD	1				1	1	
Mendocino County APCD	2	2	2		1	3	
Mojave Desert AQMD	6	2	3	2	1	4	
Monterey Bay Unified APCD	6	1	2		2	5	
North Coast Unified AQMD					2	2	
Northern Sierra AQMD	2				4	2	
Northern Sonoma County APCD	1					3	
Placer County APCD	2						
Sacramento Metropolitan AQMD	4	3	4	2	2	5	
San Joaquin Valley APCD	11	5	10		5	8	
San Luis Obispo County APCD	5		3	1	1	4	
Santa Barbara County APCD	4	2	3	3		2	
Shasta County AQMD	2				1	2	
Siskiyou County APCD					1		
Tehama County APCD						1	
Ventura County APCD	6		2		4	3	
Yolo-Solano AQMD	2				1		
TOTALS	**81**	**23**	**44**	**9**	**48**	**85**	**1**

Source: California State and Local Air Monitoring Network Plan - 2007, Planning and Technical Support Division, Air Quality Data Branch, June 2007

The SLAMS monitors do not represent all of the criteria pollutant monitors operated in the ARB PQAO. A significant number of criteria pollutant monitors are designated as Special Purpose Monitors or have no designation as summarized in Table 2.

TABLE 2: SUMMARY OF OTHER CRITERIA POLLUTANT MONITORS IN THE ARB PQAO

AGENCY	Ozone	CO	NO2	SO2	PM2.5	PM10
ARB	7					2
Antelope Valley	1					
Great Basin Unified APCD						1
Imperial County APCD	3		1		2	5
Mojave Desert AQMD						1
Monterey Bay Unified APCD	2	1	1	1	1	2
North Coast Unified AQMD	1	1	1	1		1
Sacramento Metropolitan AQMD	2	1	1			
San Luis Obispo County APCD						1
Santa Barbara County APCD	4	2	4	2		2
Siskiyou County APCD	1					2
Tehama County APCD	1					1
Yolo-Solano AQMD						3
TOTALS	**22**	**5**	**8**	**4**	**1**	**15**

Source: California State and Local Air Monitoring Network Plan - 2007, Planning and Technical Support Division, Air Quality Data Branch, June 2007

The ARB PQAO also collects data for non-criteria pollutants and meteorological data as summarized in Table 3.

TABLE 3: SUMMARY OF NON-CRITERIA POLLUTANT AND METEOROLOGICAL MONITORING IN THE ARB PQAO

AGENCY	Met	PM2.5 BAM	PM10 TEOM	PM2.5 Spec.	NMHC	NMOC	Toxics	COH	Light Scat.	H2S	THC
ARB	37	18	2	7	3	2	6				
Antelope Valley APCD	1		1								
Great Basin Unified APCD	11		10								
Imperial County APCD	1										
Lake County AQMD	1							1	1		
Mendocino County APCD	4										
Mojave Desert AQMD	5		3		1					1	
Monterey Bay Unified APCD	6	2	2								
North Coast Unified APCD	1										
Northern Sierra AQMD	3		1	1							
North Sonoma County APCD	2										

Sac. Metro. AQMD	8	3	2	4	4				1		
San Joaquin Valley APCD	13	5	3		4	4					
San Luis Obispo Cnty APCD	3		1								
Santa Barbara County APCD	7									1	2
Shasta County AQMD	1	1									
Ventura County APCD	6	4		1	2	2	1				
Yolo-Solano AQMD	3	2									
TOTALS	**113**	**35**	**25**	**13**	**14**	**8**	**7**	**1**	**2**	**2**	**2**

Source: California State and Local Air Monitoring Network Plan - 2007, Planning and Technical Support Division, Air Quality Data Branch, June 2007

Finding: The Stockton MSA in the San Joaquin Valley Air Basin does not meet the minimum SLAMS monitoring requirements for PM2.5.

Discussion: The Stockton MSA had a 2000 population of 563,598 people and an estimated 2006 population of 673,170 people. The 2004-2006 annual and daily PM2.5 design values for this MSA, based on data collected at the Stockton Hazelton monitoring site, are 12.9 ug/m3 and 41 ug/m3 respectively. EPA regulations require MSAs with populations between 500,000 and 1,000,000 people and PM2.5 design values greater than 85% of either the annual or daily NAAQS to have a minimum of two PM2.5 monitoring sites designated as SLAMS. There is currently only one PM.5 site in the Stockton MSA, Stockton-Hazelton Street (AQS#06-077-1002) designated as a SLAMS site.

Recommendation: Establish an additional PM2.5 SLAMS monitoring site in the Stockton MSA.

Finding: The Modesto MSA in the San Joaquin Valley Air Basin does not meet the minimum SLAMS monitoring requirements for PM2.5.

Discussion: The Modesto MSA had a 2000 population of 446,997 people. The population of this MSA has grown and the estimated 2006 population was 512,138 people. The 2004-2006 annual and daily PM2.5 design values for this MSA, based on data collected at the Modesto-14th Street monitoring site, are 14.1 ug/m3 and 51 ug/m3 respectively. EPA regulations require MSAs with populations between 500,000 and 1,000,000 people and design values greater than 85% of either the annual or daily NAAQS to have a minimum of two PM2.5 monitoring sites designated as SLAMS sites. There is currently only one PM.5 site in the Modesto MSA, Stockton-14th Street (AQS#06-099-0005) designated as a SLAMS site.

Recommendation: Establish an additional PM2.5 SLAMS monitoring site in the Modesto MSA.

Finding: The Red Bluff MSA in the Sacrament Valley Air Basin does not meet the minimum SLAMS monitoring requirements for ozone.

Discussion: The Red Bluff MSA had a 2000 population of 56,039 people. The population of this MSA has grown and the estimated 2006 population was 61,686 people. The 2004–2006 ozone design value for this MSA, based on data collected at a Special Purpose Monitor located in Red Bluff, is 0.072 ppm. EPA regulations require MSAs with populations between 50,000 and 350,000 people and design values greater than 85% of the NAAQS to have a minimum of one ozone monitoring site designated as a SLAMS site. There are currently two ozone sites operating in this MSA, Red Bluff – Oak Street (AQS# 06-103-0005) and Tuscan Butte (AQS# 06-103-0004), however both are designated as Special Purpose Monitoring sites.

Recommendation: Establish a SLAMS ozone monitoring site in the Red Bluff MSA. This can be accomplished by either establishing a new site or designating the existing Red Bluff – Oak Street site as a SLAMS site. We do not believe the Tuscan Butte site to be an appropriate SLAMS site for this MSA due to its elevation and unique siting characteristics.

Finding: The Visalia-Porterville MSA in the San Joaquin Valley Air Basin does not meet the minimum SLAMS monitoring requirements for ozone.

Discussion: The Visalia-Porterville MSA had a 2000 population of 368,021 people. The population of this MSA has grown and the estimated 2006 population was 419,909 people. The 2004-2006 ozone design value for this MSA, based on data collected at the Visalia-Church Street monitoring site, is 0.092 ppm. EPA regulations require MSAs with populations between 350,000 and 4,000,000 people and design values greater than 85% of the ozone NAAQS to have a minimum of two ozone monitoring sites designated as SLAMS sites. There is currently only one ozone site in the Visalia-Porterville MSA, Visalia-Church Street (AQS#06-107-2002) designated as a SLAMS site.

Recommendation: Establish an additional ozone SLAMS monitoring site in the Visalia-Porterville MSA.

Finding: Valid concentration data for the Yreka PM2.5 monitor (AQS# 06-093-2001) has not been submitted to the AQS database since December 2006.

Discussion: Based on the null value codes in the AQS database, it appears that this monitor began malfunctioning in November 2006 and from December 13, 2006 through July 2007 has not submitted any data to AQS. Null value codes of "machine malfunction" and "scheduled but not collected" have been consistently entered into AQS during this period. While this monitor is not required under EPA regulations, the ARB has designated it as a SLAMS site. SLAMS sites should meet a data capture rate of 75%.

Recommendation: Determine the reason for the poor data capture at this monitoring site and implement appropriate corrective actions to ensure a data capture rate of at least 75%.

Finding: The Lakeport PM10 site has not reported PM10 data correctly to AQS since March 2001.

Discussion: Beginning in April 2001, PM10 data from the Lakeport monitoring site (AQS# 06-033-3001) has been submitted to the AQS database under the local condition parameter (AQS code 85101) rather than under the standard Temperature and pressure parameter (AQS code 81102). The PM10 NAAQS requires data to be adjusted to Standard Temperature and Pressure conditions (See 40 CFR 50, Appendix J, section 11).

Recommendation: The ARB PQAO needs to ensure that PM10 data is submitted to the AQS database under the appropriate parameter codes. The ARB should review the PM10 data from the Lakeport monitoring site to determine if PM10 data at local conditions was correctly submitted to the AQS database. If this is the case, the PM10 concentrations will need to be recalculated according to the procedures in 40 CFR 50, Appendix J and resubmitted to AQS under the correct parameter code. Alternatively, the data in AQS may already be corrected to Standard Temperature and Pressure and simply incorrectly submitted under the wrong AQS parameter code.

Finding: Information in the ARB State and Local Air Monitoring Network Plan, dated June 2007, incorrectly indicates the availability of data.

Discussion: In comparing data in the EPA AQS database and the ARB Network Plan, we discovered a number of inconsistencies.

The Grass Valley and Truckee PM10 sites operated by NSAQMD (AQS # 06-057-0005 and 06-057-1001, respectively) collect continuous data that has been reported to AQS through 2006 yet ARB's 2007 S&L Monitoring Network Plan indicates that continuous PM10 data for these sites are only available through 2003.

In Glenn County, the Willows-East Laurel Street site (AQS # 06-021-0002) discontinued PM10 operations in September 2006 and was replaced by the Willows-North Colusa Street site (AQS# 06-021-0003). The 2007 S&L Monitoring Network Plan erroneously identifies the old site as continuing to collect PM10 data through 2007 and indicates that the new site only collects ozone data.

In San Luis Obispo County, the Carrizo Plains School SLAMS PM10 Monitor (AQS# 06-079-8006) was closed in AQS as of December 31, 2006 yet the 2007 S&L Monitoring Network Plan indicates that data for 2007 is available. The Nipomo-Guadalupe Road PM10 Monitor (AQS# 06-079-2004) is identified as a SLAMS site in the 2007 S&L Monitoring Network Plan, but is not designated as a SLAMS monitor by the San Luis Obispo APCD in their 2007 Ambient Air Monitoring Network Review.

Recommendation: The ARB needs to ensure that the Annual Network Plans accurately reflect the availability of monitoring data, which monitors are currently operational, and that there is agreement between the ARB and local districts as to the designation of sites.

Finding: The AQS database identifies the Siskiyou County APCD as its own PQAO.

Discussion: Two sites in Siskiyou County, Mount Shasta (AQS# 06-093-0004) and Lava Beds National Monument (AQS# 06-093-0005) are listed as being part of the Siskiyou County PQAO. This is an error that needs correction. According to the ARB 2007 S&L Monitoring Network Plan, Mount Shasta is operated by Siskiyou County APCD; therefore it should be listed as part of the ARB PQAO. Lava Beds National Monument is operated by the National Park Service. Depending on the specifics on how this monitor is operated, whether it is audited by ARB and which laboratory performs the mass analysis of filters, this monitor's PQAO association should be verified.

Recommendation: The ARB should work with EPA to ensure that the monitors in the ARB PQAO are correctly identified in the AQS database.